

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Previously Presented) A method for enabling access to workflow resource objects in a workflow engine, comprising:

receiving a request, from a calling entity, for workflow resource objects of a specified type in the workflow engine, wherein the specified type of the requested resource objects comprises at least one of workflow objects, workflow templates and work lists defined in the workflow engine;

generating a request to the workflow engine for information on available workflow resource objects of the specified type;

in response to receiving the information from the workflow engine, generating a collection object including one metadata element for each workflow resource object of the specified type in the workflow engine; and

returning the generated collection object to the calling entity.

2. (Original) The method of claim 1, wherein the calling entity comprises an application program.

3. (Previously Presented) The method of claim 1, wherein the calling entity issues the request from a client and wherein the request is received on a server including the workflow engine.

4. (Currently Amended) The method of claim 1, wherein the workflow engine is one of a plurality of [[service]] workflow engines enabling access to [[service resources]] workflow resource objects, wherein the request for the workflow resource objects from the calling entity comprises a method that is a member of a service class implementation of the workflow engine, wherein each [[service]] workflow engine provides one service class implementation of methods and objects from a same abstract service class implementing the operations of receiving the request, generating the request to the workflow engine, generating the collection object, and returning the generated collection object.

5. (Previously Presented) The method of claim 1, wherein the workflow engine and other service engines comprise workflow products from different vendors.

6. (Original) The method of claim 5 wherein the workflow service class implementations from different vendors each include methods and objects from a same abstract workflow service class specifying methods and objects to include in all workflow service class implementations.

7. (Canceled)

8. (Previously Presented) The method of claim 1, wherein the collection object is generated using methods from a collection object class, further comprising:

receiving a retrieve method in the collection object class from the calling entity requesting the workflow resource object represented by one selected metadata element in the collection object;
generating an additional request to the workflow engine for the workflow resource object requested in the retrieve method;
receiving the requested workflow resource object from the workflow engine; and
returning the requested workflow resource object to the calling entity invoking the retrieve method.

9. (Original) The method of claim 8, wherein the calling entity uses methods from the collection object class to access the collection object.

10. (Previously Presented) The method of claim 9, wherein the generated additional request to the workflow engine is in a service class implemented by the workflow engine including methods and objects to access the workflow engine.

11. (Currently Amended) ~~The method of claim 8,~~ A method for enabling access to workflow resource objects in a plurality of workflow engines, comprising:
receiving a request, from a calling entity, for workflow resource objects of a specified type in a specified workflow engine, wherein the specified type of the requested resource objects

comprises at least one of workflow objects, workflow templates and work lists defined in the specified workflow engine, wherein the [[application]] workflow engine is one of a plurality of [[service]] workflow engines enabling access to [[service resources]] workflow resource objects, and wherein each [[service]] workflow engine provides one collection object class
implementation of methods from a same abstract collection object class used to instantiate and manipulate a collection object including metadata on workflow resource objects available at the workflow engine;

generating a request to the workflow engine for information on available workflow resource objects of the specified type;

in response to receiving the information from the workflow engine, generating a collection object using methods from the collection object class for the workflow engine from which the information was returned including one metadata element for each workflow resource object of the specified type in the workflow engine, and

returning the generated collection object to the calling entity.

12. (Previously Presented) The method of claim 1, wherein the collection object is generated using methods from a collection object class and wherein the request for the workflow resource object from the calling entity is in a service class implemented by the workflow engine that includes methods and objects to access the workflow engine.

13. (Previously Presented) A system for enabling access to workflow resource objects, comprising:

a workflow engine including workflow resource objects;

means for receiving a request, from a calling entity, for workflow resource objects of a specified type in the workflow engine, wherein the specified type of the requested resource objects comprises at least one of workflow objects, workflow templates and work lists defined in the workflow engine;

means for generating a request to the workflow engine for information on available workflow resource objects of the specified type;

means for generating a collection object including one metadata element for each resource object of the specified type in the workflow engine in response to receiving the information from the workflow engine; and

means for returning the generated collection object to the calling entity.

14. (Original) The system of claim 13, wherein the calling entity comprises an application program.

15. (Previously Presented) The system of claim 13, wherein the calling entity comprises a client and wherein the means for receiving the request comprises a server including the workflow engine.

16. (Currently Amended) The system of claim 13, wherein the workflow engine is one of a plurality of [[service]] workflow engines enabling access to [[service resources]] workflow resource objects, wherein the means for requesting the resource objects from the calling entity uses a method that is a member of a service class implementation of the workflow engine, wherein each [[service]] workflow engine provides one service class implementation of methods and objects from a same abstract service class implementing the means for receiving the request, generating the request to the workflow engine, generating the collection object, and returning the generated collection object.

17. (Previously Presented) The system of claim 16, wherein the workflow engine and other service engines comprise workflow products from different vendors.

18. (Original) The system of claim 17, wherein the workflow service class implementations from different vendors each include methods and objects from a same abstract workflow service class specifying methods and objects to include in all workflow service class implementations.

19. (Canceled)

20. (Previously Presented) The system of claim 13, wherein the collection object is generated using methods from a collection object class, further comprising:

means for receiving a retrieve method in the collection object class from the calling entity requesting the resource object represented by one selected metadata element in the collection object;

means for generating an additional request to the workflow engine for the resource object requested in the retrieve method;

means for receiving the requested resource object from the workflow engine; and

means for returning the requested resource object to the calling entity invoking the retrieve method.

21. (Original) The system of claim 20, wherein the calling entity uses methods from the collection object class to access the collection object.

22. (Previously Presented) The system of claim 21, wherein the means for generating the additional request to the workflow engine comprises a method in a service class implemented by the workflow engine including methods and objects to access the workflow engine.

23. (Currently Amended) ~~The system of claim 20, further comprising:~~ A system for enabling access to workflow resource objects, comprising:

a plurality of [[service]] workflow engines enabling access to [[service]] workflow resources, including the workflow engine, wherein each [[service]] workflow engine provides one collection object class implementation of methods from a same abstract collection object class used to instantiate and manipulate a collection object including metadata on resource objects available at the workflow engine.

means for receiving a request, from a calling entity, for workflow resource objects of a specified type in a specified workflow engine, wherein the specified type of the requested resource objects comprises at least one of workflow objects, workflow templates and work lists defined in the specified workflow engine;

means for generating a request to the specified workflow engine for information on available workflow resource objects of the specified type;

means for generating a collection object using methods from the collection object class for the specified workflow engine, wherein the generated collection object includes one metadata

element for each resource object of the specified type in the specified workflow engine in response to receiving the information from the specified workflow engine; and means for returning the generated collection object to the calling entity.

24. (Previously Presented) The system of claim 13, wherein the means for generating the collection object uses methods from a collection object class and wherein the means for requesting the resource object from the calling entity uses methods in a service class implemented by the application engine that includes methods and objects to access the workflow engine.

25. (Previously Presented) A computer readable medium including code for enabling access to workflow resource objects in workflow engine by:

receiving a request, from a calling entity, for workflow resource objects of a specified type in the workflow engine;

generating a request to the workflow engine for information on available workflow resource objects of the specified type, wherein the specified type of the requested resource objects comprises at least one of workflow objects, workflow templates and work lists defined in the workflow engine;

in response to receiving the information from the workflow engine, generating a collection object including one metadata element for each workflow resource object of the specified type in the workflow engine; and

returning the generated collection object to the calling entity.

26. (Previously Presented) The computer readable medium of claim 25, wherein the calling entity comprises an application program.

27. (Previously Presented) The computer readable medium of claim 25, wherein the calling entity issues the request from a client and wherein the request is received on a server including the workflow engine.

28. (Currently Amended) The computer readable medium of claim 25, wherein the workflow engine is one of a plurality of [[service]] workflow engines enabling access to

[[service resources]] workflow resource objects, wherein the request for the resource objects from the calling entity comprises a method that is a member of a service class implementation of the [[application]] workflow engine, wherein each [[service]] workflow engine provides one service class implementation of methods and objects from a same abstract service class implementing the operations of receiving the request, generating the request to the workflow engine, generating the collection object, and returning the generated collection object.

29. (Previously Presented) The computer readable medium of claim 25, wherein the workflow engine and other service engines comprise workflow products from different vendors.

30. (Previously Presented) The computer readable medium of claim 29, wherein the workflow service class implementations from different vendors each include methods and objects from a same abstract workflow service class specifying methods and objects to include in all workflow service class implementations.

31. (Canceled)

32. (Previously Presented) The computer readable medium of claim 25, wherein the collection object is generated using methods from a collection object class, further comprising:
receiving a retrieve method in the collection object class from the calling entity requesting the resource object represented by one selected metadata element in the collection object;

generating an additional request to the workflow engine for the workflow resource object requested in the retrieve method;

receiving the requested workflow resource object from the workflow engine; and
returning the requested workflow resource object to the calling entity invoking the retrieve method.

33. (Previously Presented) The computer readable medium of claim 32, wherein the calling entity uses methods from the collection object class to access the collection object.

34. (Previously Presented) The computer readable medium of claim 33, wherein the generated additional request to the workflow engine is in a service class implemented by the workflow engine including methods and objects to access the workflow engine.

35. (Currently Amended) ~~The computer readable medium of claim 32,~~ A computer readable medium including code for enabling access to workflow resource objects in workflow engine by:

receiving a request, from a calling entity, for workflow resource objects of a specified type in the workflow engine, wherein the workflow engine is one of a plurality of [[service]] workflow engines enabling access to [[service resources]] workflow resource objects, wherein each [[service]] workflow engine provides one collection object class implementation of methods from a same abstract collection object class used to instantiate and manipulate a collection object including metadata on resource objects available at the workflow engine;

generating a request to the workflow engine for information on available workflow resource objects of the specified type, wherein the specified type of the requested resource objects comprises at least one of workflow objects, workflow templates and work lists defined in the workflow engine;

in response to receiving the information from the workflow engine, generating a collection object using methods from the collection object class including one metadata element for each workflow resource object of the specified type in the workflow engine; and

returning the generated collection object to the calling entity.

36. (Previously Presented) The computer readable medium of claim 25, wherein the collection object is generated using methods from a collection object class and wherein the request for the workflow resource object from the calling entity is in a service class implemented by the workflow engine that includes methods and objects to access the workflow engine.

37. (New) The method of claim 1, further comprising:

providing a collection object class implementation of methods from an abstract collection object class used to instantiate and manipulate a collection object including metadata on workflow resource objects available at the workflow engine, wherein the collection object class

includes methods used to generate the collection object, wherein the collection object class comprises a workflow engine specific implementation of the abstract collection object class.

38. (New) The system of claim 13, further comprising:

means for providing a collection object class implementation of methods from an abstract collection object class used to instantiate and manipulate a collection object including metadata on workflow resource objects available at the workflow engine, wherein the collection object class includes methods used to generate the collection object, wherein the collection object class comprises a workflow engine specific implementation of the abstract collection object class.

39. (New) The computer readable medium of claim 25, further comprising:

providing a collection object class implementation of methods from an abstract collection object class used to instantiate and manipulate a collection object including metadata on workflow resource objects available at the workflow engine, wherein the collection object class includes methods used to generate the collection object, wherein the collection object class comprises a workflow engine specific implementation of the abstract collection object class.